UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,009	09/27/2001	· Patrick Joseph Bohrer	AUS920010429US1	2742

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EXAMINER
HOLLAR, ANDREA B

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/965,009	BOHRER ET AL.
		Examiner	Art Unit	
		Andrea Hollar	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _9/27/2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-26_ is/are rejected.

7)☒ Claim(s) _10 and 19_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _27 September 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include

the following reference character(s) not mentioned in the description: 200, 214, and 410. Corrected

drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the

reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the

Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. Each drawing sheet submitted after the filing date of an application must be labeled in

the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the

changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Claim Objections

Claim 10 is objected to because of the following informalities: "the file" and "the client" lack

antecedence. Appropriate correction is required.

Claim 19 is objected to because of the following informalities: "the file" lacks antecedence.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b),
by another filed in the United States before the invention by the applicant for patent or (2) a
patent granted on an application for patent by another filed in the United States before the
invention by the applicant for patent, except that an international application filed under the treaty
defined in section 351(a) shall have the effects for purposes of this subsection of an application
filed in the United States only if the international application designated the United States and
was published under Article 21(2) of such treaty in the English language.

Claims 1, 10, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Dutta (patent

number 6,658,462).

With respect to claim 1, Dutta discloses a method of processing a client request for a file,

comprising:

transmitting a first fragment of the file that is stored in a first tier of server storage to the client

(col. 4, lines 58-59);

retrieving a subsequent fragment of the file from a lower tier of storage while the first fragment is

transmitting (col. 4, lines 59-61); and

after transmission of the first fragment completes, transmitting the subsequent fragment to the

client (col. 4, lines 61-65).

With respect to claim 10, Dutta discloses a server device, comprising:

a processor (fig. 2, item 105);

a system memory accessible to the processor and configured with instructions suitable for

execution by the processor (fig. 2, item 105);

server code means for transmitting a first fragment of the file that is stored in a first tier of server

storage to the client (col. 4, lines 58-59);

server code means for retrieving a subsequent fragment of the file from a lower tier of storage

while the first fragment is transmitting (col. 4, lines 59-61); and

server code means for transmitting the subsequent fragment to the client after transmission of the

first fragment completes (col. 4, lines 61-65).

With respect to claim 19, Dutta discloses a computer program product residing on a computer

readable medium for enabling a server device to process client requests, comprising:

server code means for transmitting a first fragment of the file that is stored in a first tier of server

storage to the client (col. 4, lines 58-59);

server code means for retrieving a subsequent fragment of the file from a lower tier of storage

while the first fragment is transmitting (col. 4, lines 59-61); and

server code means for transmitting the subsequent fragment to the client after transmission of the

first fragment completes (col. 4, lines 61-65).

Claims 1-5, 10-14, and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin

(patent number 6,405,256).

With respect to claim 1, Lin discloses a method of processing a client request for a file,

comprising:

transmitting a first fragment of the file that is stored in a first tier of server storage (fig. 1, item

114,126) to the client (fig. 1, item 120; col. 8, lines 2-4);

retrieving a subsequent fragment of the file from a lower tier of storage (fig. 1, item 112, 126)

while the first fragment is transmitting (col. 8, lines 4-6); and

after transmission of the first fragment completes, transmitting the subsequent fragment to the

client (col. 8, lines 14-16).

With respect to claim 2, Lin discloses that transmitting the first fragment includes retrieving the

first fragment from a file cache of the server (col. 7, lines 65-66; fig. 1, item 114, 126).

With respect to claim 3, Lin discloses that the file cache includes a first portion in which the first

fragment is stored, and further comprising storing the subsequent fragment in a second portion of the file

cache (col. 8, lines 56-61). In the process of streaming the segments it is possible for two segments to be

stored in the same buffer at the same time due to congestion, causing the buffer to increase to include

additional memory locations.

With respect to claim 4, Lin discloses that the file cache comprises a portion of the volatile system

memory of the server (col. 7, lines 9-12).

With respect to claim 5, Lin discloses that the lower tier of storage comprises at least one of a

server disk device, a networked storage device, or a remote system memory (fig. 1, item 112, 126; col. 7,

line 11).

With respect to claim 10, Lin discloses a server device (fig. 1, item 100,106), comprising:

a processor (fig. 1, item 102);

a system memory accessible to the processor and configured with instructions suitable for

execution by the processor (fig. 1, item 104);

server code means for transmitting a first fragment of the file that is stored in a first tier of server

storage to the client (col. 8, lines 2-4);

server code means for retrieving a subsequent fragment of the file from a lower tier of storage

while the first fragment is transmitting (col. 8, lines 4-6); and

server code means for transmitting the subsequent fragment to the client after transmission of the

first fragment completes (col. 8, lines 14-16).

With respect to claim 11, Lin discloses that the code means for transmitting the first fragment

includes retrieving the first fragment from a file cache of the server (col. 7, lines 65-66).

With respect to claim 12, Lin discloses that the file cache includes a first portion in which the first

fragment is stored, and further comprising code means for storing the subsequent fragment in a second

portion of the file cache (col. 8, lines 56-61). In the process of streaming the segments it is possible for

two segments to be stored in the same buffer at the same time due to congestion, causing the buffer to

increase to include additional memory locations.

With respect to claim 13, Lin discloses that the file cache comprises a portion of the server

system memory (col. 7, lines 9-12).

With respect to claim 14, Lin discloses that the lower tier of storage comprises at least one of a

server disk device, a networked storage device, or a remote system memory (fig. 1, item 112, 126; col. 7,

line 11).

With respect to claim 19, Lin discloses a computer program product residing on a computer

readable medium for enabling a server device to process client requests, comprising:

server code means for transmitting a first fragment of the file that is stored in a first tier of server

storage to the client (col. 8, lines 2-4);

server code means for retrieving a subsequent fragment of the file from a lower tier of storage

while the first fragment is transmitting (col. 8, lines 4-6); and

server code means for transmitting the subsequent fragment to the client after transmission of the

first fragment completes (col. 8, lines 14-16).

With respect to claim 20, Lin discloses that the code means for transmitting the first fragment

includes code means for retrieving the first fragment from a file cache of the server (col. 7, lines 65-66).

With respect to claim 21, Lin discloses that the file cache includes a first portion in which the first

fragment is stored, and further comprising storing the subsequent fragment in a second portion of the file

cache (col. 8, lines 56-61). In the process of streaming the segments it is possible for two segments to be

stored in the same buffer at the same time due to congestion, causing the buffer to increase to include

additional memory locations.

With respect to claim 22, Lin discloses that the file cache comprises a portion of volatile server

system memory (col. 7, lines 9-12).

With respect to claim 23, Lin discloses that the lower tier of storage comprises at least one of a

server disk device, a networked storage device, or a remote system memory (fig. 1, item 112, 126; col. 7,

line 11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

.rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

Claims 6, 15, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view

of Bishop (patent number 5,539,895).

With respect to claim 6, Lin does not expressly disclose that responsive to determining that a first

fragment of the requested file is not valid in the first tier of storage, retrieving the first fragment from a

lower tier of storage and storing the first fragment in the first tier.

Bishop teaches that if it is determined that data in a first level of cache is determined to be invalid that the data can be updated by transmitting it to the first level cache from the second level memory (col. 1, lines 50-56).

Lin and Bishop are analogous art because they are both from the same field of endeavor of computer systems.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Lin's method to allow it to re-load a data segment from the previous cache if it is determined that the data segment is invalid. The motivation for doing so would have been to enable Lin's method to auto-correct any invalid data segments.

Therefore it would have been obvious to combine Bishop with Lin for the benefit of auto-correction to obtain the invention as specified in claim 6.

With respect to claim 15, Lin does not expressly disclose code means for retrieving the first fragment from a lower tier of storage and storing the first fragment in the first tier responsive to determining that a first fragment of the requested file is not valid in the first tier of storage.

Bishop teaches that if it is determined that data in a first level of cache is determined to be invalid that the data can be updated by transmitting it to the first level cache from the second level memory (col. 1, lines 50-56).

Lin and Bishop are analogous art because they are both from the same field of endeavor of computer systems.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Lin's server device to allow it to re-load a data segment from the previous cache if it is determined that the data segment is invalid. The motivation for doing so would have been to enable Lin's device to auto-correct any invalid data segments.

Therefore it would have been obvious to combine Bishop with Lin for the benefit of auto-correction to obtain the invention as specified in claim 15.

With respect to claim 24, Lin does not expressly disclose code means for retrieving the first fragment from a lower tier of storage and storing the first fragment in the first tier responsive to determining that a first fragment of the requested file is not valid in the first tier of storage.

Bishop teaches that if it is determined that data in a first level of cache is determined to be invalid that the data can be updated by transmitting it to the first level cache from the second level memory (col. 1, lines 50-56).

Lin and Bishop are analogous art because they are both from the same field of endeavor of computer systems.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Lin's computer program product to allow it to re-load a data segment from the previous cache if it is determined that the data segment is invalid. The motivation for doing so would have been to enable Lin's product to auto-correct any invalid data segments.

Therefore it would have been obvious to combine Bishop with Lin for the benefit of auto-correction to obtain the invention as specified in claim 24.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Price (6,766,376).

With respect to claim 9, Lin discloses that the data transfers may be accomplished using any conventional method applicable to communication networks (col. 5, lines 7-11), however Lin does not expressly disclose that the first fragment is formatted according to the transmission control protocol (TCP).

Price teaches that it is known to use TCP in data streaming operations (col. 4, lines 39-42).

Lin and Price are analogous art because they are both from the same field of endeavor of data streaming.

At the time of invention it would have been obvious to a person of ordinary skill in the art to allow Lin's method to use TCP for data transfers. The motivation for doing so would have been to provide reliable delivery of packets in an ordered sequence (col. 4, lines 41-42).

Therefore it would have been obvious to combine Price and Lin for the benefit of reliable, ordered

packet delivery to obtain the invention as specified in claim 9.

With respect to claim 18, Lin discloses that the data transfers may be accomplished using any

conventional method applicable to communication networks (col. 5, lines 7-11), however Lin does not

expressly disclose that the first fragment is formatted according to the transmission control protocol

(TCP).

Price teaches that it is known to use TCP in data streaming operations (col. 4, lines 39-42).

Lin and Price are analogous art because they are both from the same field of endeavor of data

streaming.

At the time of invention it would have been obvious to a person of ordinary skill in the art to allow

Lin's server device to use TCP for data transfers. The motivation for doing so would have been to

provide reliable delivery of packets in an ordered sequence (col. 4, lines 41-42).

Therefore it would have been obvious to combine Price and Lin for the benefit of reliable, ordered

packet delivery to obtain the invention as specified in claim 18.

Claims 7-8, 16-17, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin

in view of Bishop as applied to claims 6, 15, and 24 above, and further in view of Walrand.

With respect to claims 7-8, 16-17, and 25-26, Lin and Bishop do not disclose determining a size

for the first fragment based upon the transmission window of a connection between the server and client

or that the first fragment size is less than or equal to the maximum active transmission window of the

server.

Walrand teaches that when using TCP, a window size is used to determine the maximum amount

of data that can be sent without an acknowledgement (p. 166, lines 12-14).

Lin, Bishop, and Walrand are all analogous art because they are all from the same field of

endeavor of computer systems.

At the time of invention it would have been obvious to one of ordinary skill in the art that TCP

could be used for Lin's data transfers (see explanation of claim 9 rejection above) and therefore that the

data would be broken up into segments no larger than the transmission window size, as taught by Walrand.

The motivation for doing so is to allow for faster data transfer because the sender can send more data without having to stop and wait for an acknowledgement.

Therefore it would have been obvious to combine Walrand with Lin and Bishop for the benefit of faster data transfer to obtain the inventions as specified in claims 7-8, 16-17, and 25-26.
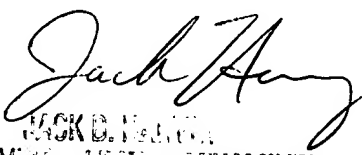
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea Hollar whose telephone number is 571-272-5862. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 571-272-3896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ABH ·

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